



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,060	08/03/2001	Deepak Pai	10001-29420	7591
2574	7590	12/28/2005	EXAMINER	
JENNER & BLOCK, LLP ONE IBM PLAZA CHICAGO, IL 60611			MAYEKAR, KISHOR	
			ART UNIT	PAPER NUMBER
			1753	
DATE MAILED: 12/28/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/922,060

Applicant(s)

PAI, DEEPAK

Examiner

Kishor Mayekar

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 13-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Applicant's arguments with respect to claims 1-11 and 13-36 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-7, 9-11, 13-17, 19-21, 24-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadow et al. (US 5,955,038) in view of Kinney (US 3,622,492). Gadow's invention is directed to an ozonizer. Gadow discloses in Figs. 2 and 3 and col. 1, lines 28-39) that the ozonizer comprises the recited conductor 120 and dielectric wherein the dielectric comprises the recited dielectric substrate 116, conductive coating 114 and protective coating 112 and the ozonizer is adapted to generate plasma in the space between the conductor 120 and the dielectric in response to the application of an alternating current, and is configured for stacking with another similar ozonizer. The difference between

Gadow and the above claims is the provision that the dielectric and the conductor are positioned to create a turbulent airflow therebetween. Kinney shows in an ozonizer the creating of turbulence in the gas stream within the space between the conductor and the dielectric (col. 4, lines 14-24). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Gadow's teachings as shown by Kinney because this would result in increasing heat transfer in the space between the conductor and the dielectric and in increasing the ozone yield.

As to the subject matter of claim 2, since Gadow discloses in col. 7, lines 18-21 that the ozonizer is formed from two glass plates arranged one parallel to the other with a discharge gap 118 formed between them, Gadow's dielectric and conductor 120 are uniformly spaced from one another.

As to the subject matter of claim 4, Gadow discloses it in col. 5, lines 61-64.

As to the subject matter of claim 6, since Kinney shows in col. 1, lines 33-35 the use of electrodes made of stainless steel in addition to aluminum, the selection of any of known equivalent electrode materials would have been within the level of ordinary skill in the art.

As to the subject matter of claims 9 and 10, Gadow discloses it in col. 6, lines 41-48.

As to the subject matter of claim 11, Kinney shows in col. 3, lines 14-29 the provision of spacer for spacing a dielectric and electrodes to keep the dielectric parallel to the electrodes and the provision would have been within the level of ordinary skill in the art.

As to the subject matter of each of claims 13 and 14, Gadow discloses it in col. 5, lines 61-67.

As to the subject matter of claim 15, since Gadow discloses the use of higher-melting metals in addition to titanium metal, the selection of any of known equivalent higher melting metals would have been within the level of ordinary skill in the art.

As to the subject matter of each of claims 16, 19, 21 and 24, the selection of the layer thickness would have been within the level of ordinary skill in the art.

As to the subject matter of each of claims 17, 20, 21 and 25, the process of applying the layer whether by sputtering or plating cannot be given any patentable weight in a device claim.

As to the subject matter of each of claims 26-28, Gadow discloses it in col.

6, lines 1-8.

As to the subject matter of claim 30, the selection of any of known equivalent turbulent manipulation structures would have been within the level of ordinary skill in the art.

As to the subject matter of each of claims 31 and 32, Gadow discloses it in Fig. 1.

As to the subject matter of each of claims 33 and 34, change in shape has been held to be obvious, *In re Gibson* 5 USPQ. Further, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248; *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

4. Claims 8, 18, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadow '038 in view of Kinney '492 as applied to claims 1-7, 9-11, 13-17, 19-21, 24-34 and 36 above, and further in view of Racca et al. (US 6,024,930). The differences between the references as applied above and the instant claims are the limitation recited in each of the instant claims. Racca shows in an ozonizer the provision that the electrode comprises copper, nickel and tin

based solder alloy (col. 1, lines 51-65 and col. 2, lines 53-67). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by Racca because the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

5. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gadow '038 in view of Kinney '492 and Iwanaga (US 5,411,713). The further difference between Gadow and Kinney as applied above and the above claim is the provision of a radial arrangement of the plurality of ozonizers. Iwanaga shows in an ozonizer the provision of a plurality of ozonizers arrangement in series and in parallel (Fig. 11). As to the provision of the ozonizer in parallel and in a radial arrangement, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by Iwanaga because the motivation to make a specific structure is always related to the properties or uses one skilled in the art

would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

### ***Response to Arguments***

6. Applicant's arguments filed October 12, 2005 have been fully considered but they are not persuasive because of the new ground of rejections as set forth in the above paragraphs.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the



advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

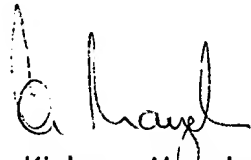
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

Art Unit: 1753

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Kishor Mayekar', is positioned above the printed name.

Kishor Mayekar  
Primary Examiner  
Art Unit 1753